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HOFFMAN WARNICK LLC
75 STATE ST
14 FL
ALBANY, NY 12207

EXAMINER
CHANG, LI WU

ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
	10/596,050	COLLET ET AL.
Office Action Summary	Examiner	Art Unit	
	LIWU CHANG	2142	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>26 May 2006</u>.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-11</u> is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) <u>1-11</u> is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on <u>26 May 2006</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☒ All   b)☐ Some * c)☐ None of:
      1.☒ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
        application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>05/26/2006</u>.
4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____
5)☐ Notice of Informal Patent Application
6)☐ Other: _____

DETAILED ACTION

1.   Claims 1-11 are pending in this application.

Claim Objections

2.   Claim 3 is objected to because of the following informalities: In claim 3, the phrase "plurality of chunks is encrypted using *the a* public key" (emphasis added) contains both "the" and "a". For the purpose of the prior art rejection in this office action, this claim will be construed as not containing the "the".

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3.   **Claims 1-3 and 8-11 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.**

4.   Claims 1-3 are directed to a system ([0007] in specification). The elements of the claim are not directed to hardware; a system may include embodiments solely consisting of software code, which is considered to be nonstatutory subject matter under the current understanding of 35 USC 101 by the USPTO.

5.   Claims 8-11 are directed a security system. A security system may include embodiments solely consisting of software code, which is considered to be nonstatutory subject matter.

<div align="center">*Claim Rejections - 35 USC § 103*</div>

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6.   **Claims 1-2, 4-5, 8-9, 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Megiddo (US Patent No. 6745231 B1), hereinafter Megiddo, in view of Christenson et al. (US Patent No. 7117246 B2), and hereinafter Christenson.**

7.   With respect to claim 1, Megiddo discloses system for enhancing the security of the e-mails transmitted from a sender to a receiver over a data transmission (Megiddo: Col 1, lines 7-11), comprising:

a Message Transfer Agent (MTA) associated with said sender for transmitting over said network an original e-mail sent by said sender (Megiddo: Col 1, lines 46-56, Col 3, lines 60-65 and Col 4, lines 10-20, describe a mail service object, e.g., an e-mail service provider (EMSP) together with components 320-328, associated with said

sender, e.g., user A, for transmitting over said network an original e-mail sent by said sender, as shown in Figures 1-3);

said MTA associated with said sender including a message splitting means adapted to divide said original e-mail into a plurality of chunks according to a predetermined algorithm and a predetermined list of relay MTAs to which are forwarded said plurality of chunks (Megiddo: Col 1, lines 46-56, Col 3, lines 60-65 and Col 4, lines 10-30, describe a mail service object, e.g., an e-mail service provider (EMSP) together with components 320-328, associated with said sender, e.g., user A, including a message splitting means, e.g., Col 4, lines 35-45, adapted to divide said original e-mail into a plurality of chunks according to a predetermined algorithm, as shown in Figure 3 and 4, and a predetermined list of relay mail service objects, e.g., EMSP components 312 and 314, to which are forwarded said plurality of chunks, e.g., M1 and M2, components 304 and 306, as shown in Figure 3); and

a chunk assembly agent for receiving from said relay MTAs the plurality of chunks and for re-assembling the plurality of chunks by using said predetermined algorithm in order to re-build said e-mail

before sending it to said receiver (Megiddo: Col 1, lines 46-56, Col 3, lines 60-65 and Col 4, lines 10-30, describe a chunk assembly agent, e.g., component 316 in Figure 3, for receiving from said relay mail service objects, e.g., components 312 and 314 in Figure 3, the plurality of chunks and for re-assembling the plurality of chunks by using said predetermined algorithm, e.g., Col 5, lines 7-11, in order to re-build said e-mail before sending it to said receiver, Col 4, lines 29-30).

Megiddo does not expressly disclose the use of MTA. However, Christenson discloses the use of MTA (Christenson: Col 1, lines 36-38). In Megiddo, the mail service object, which includes EMSP together with component 302 in Figure 3, comprises functions of transfer, relay and routing, as those of a MTA, whereas MTA had been used in mail tools. It would have been obvious for one of ordinary skill in the pertinent art at the time of invention to incorporating the teachings of Christenson with the teachings of Megiddo by employing MTAs in Megiddo's framework, because MTA is a known mail service tool and may provide useful e-mail service properties to Megiddo's system.

8.   With respect to claim 2, Megiddo discloses wherein each of said plurality of chunks is transmitted as a chunk e-mail having a destination address which is an address of said chunk assembly agent (Megiddo: as shown in Figure 3, e-mail chunks, which are forwarded to components 312 and 314, Col 4, lines 8-9, are destined to component 316, which may have the same address as that of user's machine, Col 5, lines 10-12, as shown in Figure 3).

9.   With respect to claim 4, Megiddo discloses method for enhancing the security of the e-mails transmitted from a sender to a receiver over a data transmission network (Megiddo: Col 1, lines 7-11) wherein a Message Transfer Agent (MTA) associated with said sender is in charge of transmitting an original e-mail sent by said sender (Megiddo: Col 1, lines 46-56, Col 3, lines 60-65 and Col 4, lines 10-20, describe a mail service object, e.g., an e-mail service provider (EMSP) together with components 320-328, associated with said sender, e.g., user A, for transmitting over said network an original e-mail sent by said sender, as shown in Figures 1-3), comprising: dividing said original e-mail into a plurality of chunks using an algorithm (Megiddo: Col 4, lines 33-44, describe dividing original e-mails into chunks using an algorithm);

sending said chunks as e-mails to different relay MTAs defined in a predetermined list of relay MTAs (Megiddo: Col 4, lines 4-9, describe sending chinks to preferred relay mail service objects, e.g., EMSPs), and

re-assembling by a chunk assembly agent said chunks in order to re-build said original e-mail by using said predetermined algorithm, before sending said original e-mail to said receiver (Megiddo: Col 5, lines 7-11, describe re-assembling chinks and sending the original e-mail to the receiver, e.g., sending the e-mail to user for display).

Megiddo does not expressly disclose the use of MTA. However, Christenson discloses the use of MTA (Christenson: Col 1, lines 36-38). In Megiddo, the mail service object, which includes EMSP together with component 302 in Figure 3, comprises functions of transfer, relay and routing, as those of a MTA, whereas MTA had been used in mail tools. It would have been obvious for one of ordinary skill in the pertinent art at the time of invention to incorporating the teachings of Christenson with the teachings of Megiddo by employing MTAs in Megiddo's framework, because MTA is a known mail service tool and may provide useful e-mail service properties to Megiddo's system.

10.   With respect to claim 5, Megiddo discloses wherein each chunk

is transmitted over said network in a chunk e-mail having a

destination address which is an address of said chunk assembly

agent (Megiddo: as shown in Figure 3, e-mail chunks, which are

forwarded to components 312 and 314, Col 4, lines 8-9, are destined

to component 316, as shown in Figure 3).

11.   With respect to claim 8, 8. A security system, comprising:

a Message Transfer Agent (MTA) associated with a sender for

transmitting over a network an original e-mail sent by the sender

(Megiddo: Col 1, lines 46-56, Col 3, lines 60-65 and Col 4, lines 10-20,

describe a mail service object, e.g., an e-mail service provider

(EMSP) together with components 320-328, associated with said

sender, e.g., user A, for transmitting over said network an original e-

mail sent by said sender, as shown in Figures 1-3), the MTA including

a message splitting system for dividing the original e-mail into a

plurality of chunks according to a predetermined algorithm and for

forwarding the plurality of chunks to a plurality of relay MTAs

(Megiddo: Col 1, lines 46-56, Col 3, lines 60-65 and Col 4, lines 10-30,

describe a mail service object, e.g., an e-mail service provider (EMSP) together with components 320-328, associated with said sender, e.g., user A, including a message splitting system, e.g., Col 4, lines 35-45, for dividing said original e-mail into a plurality of chunks according to a predetermined algorithm, as shown in Figure 3 and 4, and forwarding the chunks e.g., M1 and M2, components 304 and 306, as shown in Figure 3, to relay mail service objects, e.g., EMSP components 312 and 314); and

a chunk assembly agent for receiving from the relay MTAs the plurality of chunks and for re-assembling the plurality of chunks using the predetermined algorithm in order to re-build the e-mail before sending it to a receiver (Megiddo: Col 1, lines 46-56, Col 3, lines 60-65 and Col 4, lines 10-30, describe a chunk assembly agent, e.g., component 316 in Figure 3, for receiving from said relay mail service objects, e.g., components 312 and 314 in Figure 3, the plurality of chunks and for re-assembling the plurality of chunks by using said predetermined algorithm, e.g., Col 5, lines 7-11, in order to re-build said e-mail before sending it to said receiver, Col 4, lines 29-30).

Megiddo does not expressly disclose the use of MTA. However, Christenson discloses the use of MTA (Christenson: Col 1, lines 36-38). In Megiddo, the mail service object, which includes EMSP together with component 302 in Figure 3, comprises functions of transfer, relay and routing, as those of a MTA, whereas MTA had been used in mail tools. It would have been obvious for one of ordinary skill in the pertinent art at the time of invention to incorporating the teachings of Christenson with the teachings of Megiddo by employing MTAs in Megiddo's framework, because MTA is a known mail service tool and may provide useful e-mail service properties to Megiddo's system.

12.   With respect to claim 9, Megiddo discloses wherein each of the plurality of chunks is transmitted to the chunk assembly agent as a chunk e-mail having a destination address corresponding to an address of the chunk assembly agent (Megiddo: as shown in Figure 3, e-mail chunks, which are forwarded to components 312 and 314, Col 4, lines 8-9, are destined to component 316, which may have the same address as that of user's machine, Col 5, lines 10-12, as shown in Figure 3).

13.   With respect to claim 11, Megiddo discloses a security system, comprising: a chunk assembly agent (Megiddo: Figure 3, a chunk assembly agent, e.g., component 316) for:

receiving from a plurality of relay Message Transfer Agents (MTAs) a plurality of chunks of an original e-mail that has been divided into the plurality of chunks according to a predetermined algorithm

(Megiddo: Col 4, lines 8-9, lines 20-25, and lines 40-44, describe relay service mail objects, e.g., EMSPs, receives email chunks from other relay service mail objects, wherein e-mails are divided into chunks according to a predetermined algorithm); and

re-assembling the plurality of chunks using the predetermined algorithm in order to re-build the e-mail before sending it to a receiver (Megiddo: Col 5, lines 3-14, describe re-assembling, e.g., re-combining, the chunks using the predetermined algorithm to re-build the e-mail before sending it to a receiver, the user).

Megiddo does not expressly disclose the use of MTA. However, Christenson discloses the use of MTA (Christenson: Col 1, lines 36-38). In Megiddo, the mail service object, which includes EMSP together with component 302 in Figure 3, comprises functions of transfer, relay and routing, as those of a MTA, whereas MTA had been used in mail tools. It would have been obvious for one of ordinary skill in the pertinent art at the time of invention to incorporating the teachings of Christenson with the teachings of Megiddo by employing MTAs in

Megiddo's framework, because MTA is a known mail service tool and may provide useful properties to Megiddo's system.

14.   **Claims 3, 6-7, 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Megiddo, in view of Christenson, as applied to claims 1, 4 and 8 above, further in view of Grobman et al. et al. (US 20040190722 A1), and hereinafter Grobman.**

15.   With respect to claims 3, Megiddo discloses wherein each of said plurality of chunks is encrypted before being transmitted over said network (Megiddo: Figure 3, component 324, and Figure 4 describe the encryption and its algorithms), but does not expressly disclose the use of public key of said chunk assembly agent. However, Grobman discloses wherein each of said plurality of chunks is encrypted using a public key of said chunk assembly agent before being transmitted over said network (Grobman: [0019], lines 3-5 and lines 15-16, and [0020], lines 1-3, wherein a chunk or an e-mail is encrypted with a public key of the chunk assembly agent, e.g., a user or a manager).

In Megiddo, security of e-mail transmission is one of the primary objectives of the invention. The public key cryptography is a commonly used encryption technique. It would have been obvious for one of ordinary skill in the art at the time of invention to combine

the teachings of Megiddo, in view of Christenson, with the teachings of Grobman by employing the public key encryption in order to provide cryptographically secure alternatives for transmission of messages over different sub-networks.

16.   With respect to claim 6, Megiddo discloses wherein each chunk is encrypted before being transmitted decrypted when received by said chunk assembly agent (Megiddo: Figure 3, component 324, Figure 4, and Figure 5 describe the encryption and description algorithms), but does not expressly disclose encryption with public key and decryption with a private key of said chunk assembly agent. However, Grobman discloses encryption with public key and decryption with a private key of said chunk assembly agent (Grobman: [0019], lines 3-5 and lines 15-16, and [0020], lines 1-3, wherein a chunk or an e-mail is encrypted with a public key of the chunk assembly agent, e.g., a user or a manager, and decrypted with recipient, e.g., the chunk assembly agent, [0032], lines 1-2). In Megiddo, security in e-mail transmission is one of the primary objectives of the invention. The public key cryptography is a

commonly used encryption technique. It would have been obvious for one of ordinary skill in the art at the time of invention to combine the teachings of Megiddo, in view of Christenson, with the teachings of Grobman by employing the public key encryption in order to provide cryptographically secure alternatives for transmission of messages over different sub-networks.

17.   With respect to claim 7, Megiddo discloses wherein text of said original e-mail is encrypted by using the public key of said receiver before being divided into a plurality of chunks (Megiddo: Figure 3, component 324 and component 328, shows emails are encrypted before being divided into a plurality of chunks). Grobman discloses encryption with the public key of the receiver (Grobman: [0019], lines 3-5 and lines 15-16).

18.   With respect to claim 10, Megiddo discloses wherein the message splitting system (Megiddo: Figure 3) encrypts each of the plurality of chunks (Megiddo: Figure 3, component 324, and Figure 5 describe the encryption and its algorithms), but does not expressly disclose

the use of public key associated with said chunk assembly agent. However, Grobman discloses the use of public key associated with said chunk assembly agent (Grobman: [0019], lines 3-5 and lines 15-16, and [0020], lines 1-3, wherein a chunk or an e-mail is encrypted with a public key of the chunk assembly agent, e.g., a user or a manager).

In Megiddo, security in e-mail transmission is one of the primary objectives of the invention. The public key cryptography is a commonly used encryption technique. It would have been obvious for one of ordinary skill in the art at the time of invention to combine the teachings of Megiddo, in view of Christenson, with the teachings of Grobman by employing the public key encryption in order to provide cryptographically secure alternatives for transmission of messages over different sub-networks.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LIWU CHANG whose telephone number is 571-270-3809. The examiner can normally be reached on 8:30AM - 6:00PM.